

WHAT IS CLAIMED:

1. A server, which is subordinate to a relay device having a port forwarding feature, comprising:

a port management means, which requests the relay device to assign a predetermined port number for a representative server and which is assigned a port number by the relay device,

wherein the port management means acquires the wide area network address of the relay device and port mapping information in case the port management means is registered to the predetermined port address and,

further wherein the port management means provides the address/port information on other servers in response to an access from a wide area network.

2. The server according to claim 1, wherein when a request is issued to the relay device,

in case the predetermined number is unregistered, the port management means is assigned the predetermined port number,

in case the predetermined port number is registered, the port management means is assigned another port number.

3. The server according to claim 1, wherein

in case it is assigned to the predetermined port number, said port management means periodically requests port mapping

information.

4. A server, which is subordinate to a relay device having a port forwarding feature, comprising:

a port management means, which requests a relay device to assign a predetermined port number for a representative server and which is assigned a port number by the relay device,

wherein the port management means makes a port mapping inquiry to other servers subordinate to the relay device in case the port management means is registered to the predetermined port number and retains the port numbers transmitted from the other servers, and

further wherein on an access from a wide area network, the port management means provides the information on the port numbers of the other servers.

5. The server according to claim 4, wherein the port management means makes an inquiry via broadcast, multicast or unicast to all servers.

6. The server according to claim 1, wherein in case the server is assigned a predetermined port number, the port management means requests use registration information from the relay device and fetches port mapping information from the use registration information.

7. The server according to claim 1, wherein
in case the server is assigned a predetermined port number,
the port management means notifies the other server of its port
number assigned.

8. The server according to any one of claims 1 through 7,
further comprising:

a web page generating section and generating a web page
where address information on other servers is attached in a
linkable fashion.

9. The server according to any one of claims 1 through 8,
wherein the port management means adds host names for
identification to other servers and posts the host names in
the address information.

10. The server according to any one of claims 1 through 9,
wherein

when the server has detected that a server registered
to a predetermined port number withdrew from the LAN, another
server transmits an identification message to register itself
to the predetermined port.

11. The server according to claim 10, wherein
other servers transmit identification messages after a

random time has elapsed and, in case two or more servers issue identification message within a certain time after that, these servers transmit identification messages respectively after a random time has elapsed until a sole server which identifies itself uses the predetermined port number.

12. The server according to any one of claims 1 through 9, wherein

after detection of withdrawal, another server is registered to the predetermined port based on the mapped port numbers.

13. The server according to claim 10, wherein

after detection of withdrawal, other servers respectively transmit identification messages after a time calculated from each server-specific value has elapsed and a sole server determined based on a predetermined determination rule becomes a representative server and is registered to said predetermined port.

14. The server according to any one of claims 10 through 13, wherein

a server registered to a predetermined port number communicates as a single unit a withdrawal notice message to the servers in the LAN to notify that the server has withdrawn

from the LAN.

15. The server according to any one of claims 10 through 13, wherein

a server in the LAN detects that there is no inquiry about port mapping information from the server registered to a predetermined port number to detect that the server has withdrawn from the LAN.

16. The server according to any one of claims 10 through 13, wherein

all servers in the LAN make inquiries to the server registered to a predetermined port number about its presence and receiving no response, detects the server has withdrawn from the LAN.

17. The server according to any one of claims 1 through 16, further comprising:

a camera,

an image data generator, which processes a picture signal of a picture shot with the camera to encode the signal, and

a web server section, which transmits the image data to a wide area network, wherein the server transmits a photographed image as an image server.

18. A server connected to a second network of a relay device

which transfers packets from its first network to its second network in accordance with a destination port number,

wherein the server requests the relay device to assign a predetermined port number out of the port numbers used for data transfer, and determining that the predetermined port number has been assigned, acquires the port assignment information on other servers from the relay device to generate display information including the port assignment information and transmit the display information in response to an access from the first network via the relay device.

19. The server according to any one of claims 1 through 18, wherein the server requests assignment of a predetermined port number used for the transfer and address information on the first network of the relay device from the relay device.

20. The server according to claim 18 or 19, wherein the server periodically acquires the port assignment information.